

A B S T R A C T

In a process for manufacturing, moulding and curing tyres for vehicle wheels without a vulcanization bladder, many
5 drawbacks can result from a direct contact between the green tyre and the fluid under pressure admitted in order to create the necessary pressing of the elastomer material against the vulcanization mould walls. In
10 accordance with the present invention, said drawbacks are avoided by including in the tyre manufacturing process a step of treating the inner surface of the green tyre in order to prevent the permeation of the fluid under pressure into the inside of the tyre structure. Said
15 treatment can be carried out by associating at least one layer of prevulcanized elastomer material with the inner surface of the green tyre.

Fig. 1.

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A PROCESS FOR MANUFACTURING, MOULDING AND CURING TYRES
5 FOR VEHICLE WHEELS

ABSTRACT OF THE DISCLOSURE

A process for manufacturing, moulding, and curing a tyre includes the steps of manufacturing a tyre comprising a first elastomer material, providing an inner surface of the tyre with a treatment to prevent permeation of a fluid under pressure through the treatment, closing the tyre into a moulding cavity defined in a vulcanization mould, admitting a fluid under pressure into a space defined by the treatment in order to press an outer surface of the tyre against the at least one wall of the moulding cavity, and applying heat to the tyre to vulcanize the first elastomer material. A shape of the at least one wall of the moulding cavity matches a shape of the outer surface of the tyre after vulcanization is complete. The treatment includes at least one layer of a second elastomer material having a sulfur-curable polymeric base and a vulcanizing system dissolved in an organic solvent.

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